



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,729	06/22/2006	Herbert Wagner	KIRCHNER	9941
20151	7590	02/07/2008	EXAMINER	
HENRY M FEIEREISEN, LLC 350 FIFTH AVENUE SUITE 4714 NEW YORK, NY 10118			DESAI, NAISHADH N	
ART UNIT		PAPER NUMBER		
2834				
MAIL DATE		DELIVERY MODE		
02/07/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/596,729	WAGNER ET AL.
	Examiner	Art Unit
	NAISHADH N. DESAI	2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 27 November 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Specification

1. Examiner noticed amendment made to specification to reflect typographical error.

Amended specification is accepted by examiner.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3,10,18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hill (US 6443295).

2. As per (**Currently amended**) independent claim 1:

A rotary support for mounting an electric machine (abstract of Hill) in a tubular structure (Fig 1,12 of Hill) or a bore, comprising (Fig 1 of Hill):
a hollow-cylindrical body arranged in a radial direction between the electric machine and the tubular structure or the bore, for torque transmission from the electric machine to the tubular structure or the bore and (Fig 1 of Hill)

an elastic connection device (Fig 1,96) arranged on an outer circumference of the hollow-cylindrical body for establishing an elastic force-fitting connection of the hollow-cylindrical body with the tubular structure or the bore (Fig 1,96).

(Since the elastic connection device of Fig 1,96 presses against the tubular structure, it establishes an elastic force-fitting connection between the hollow cylindrical body and the tubular structure).

3. As per (Previously presented) dependent claim 2:

Fig 1, 96 shows an o-ring which is well known in the art to be detachably connected to the tubular structure of claim 1.

4. As per (Previously presented) dependent claim 3:

Figure 1 of Hill shows element 96 to completely surround the circumference of the hollow cylindrical body at one or more axial areas.

5. As per (Previously presented) dependent claim 10:

Figure 1, 94 is an annular groove (fixing element) in which the o-ring (element 96) is received in. Col 4 lines 53-57.

6. As per (New) dependent claim 18:

The rotary support of claim 1, wherein the elastic connection device (**Fig 1,96**) is constructed to realize attenuation, centering and torque transmission between the hollow-cylindrical body and the tubular structure (**the elastic connection device (o-ring) centers and realizes attenuation(as it is elastic) and transmits torque between the hollow-cylindrical body and the tubular structure (as it presses against the tubular structure))**).

7. As per (New) dependent claim 19:

The rotary support of claim 1, wherein the hollow-cylindrical body has fixing elements on the outer circumference of the hollow-cylindrical body (**Fig 1,94**), said elastic connection device (**Fig 1,96**) being received between neighboring fixing elements and sized to project slightly radially beyond the fixing elements (**it is clear that the o-ring is projecting slightly radially beyond the fixing elements since it is pressing against the tubular structure, otherwise if it was resting inside and not protruding radially beyond the fixing elements, it would NOT be able to press against the tubular structure**).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims **5-7,12 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 6443295)

8. As per (Previously presented) dependent claims 5 and 6:

Element 96 of Figure 1 of Hill is an illustration of an o-ring. It is well known in the art to make o-rings of elastic material like rubber or the like. Hill discloses the claimed invention except for explicitly mentioning the material used for the o-rings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use o-rings made of an elastic material like rubber or the like, since it has been held to be within the general skill of a worker in the art to select a known material on the

basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416

9. As per (Previously presented) dependent claim 7:

Figure 1,96 of Hill and also Col 4 lines 47-67.

10. As per (Previously presented) dependent claims 12:

Hill discloses the claimed invention except for the shape of the o-ring to be conical. It would have been an obvious matter of design choice to make the o-ring in a conical shape, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955)

11. As per (Previously presented) dependent claim 17:

Hill discloses the claimed invention except for the elastic connection device to be arranged conically. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the elastic connection device in a conical shape in relation to the length axis of the hollow cylindrical body, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70.

Claims 4,8,9 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 6443295) in view of Page et al (US 4399598).

12. As per (Previously presented) dependent claim 4:

The rotary support of claim 1, wherein the elastic connection device has components which are spaced at even distances in circumferential direction and/or axial direction on an outer surface area of the hollow-cylindrical body.

Hill discloses the device as claimed above. Hill does not disclose the elastic device to have components spaced at even distances. Page et al disclose an elastic device having components spaced at even distances (Figures 2 and 3 of Page et al shows the elastic connection device (element 50) and Col 2 lines 2-8). It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Hill to have components spaced at even intervals as disclosed by Page et al. The motivation to do so would be that it would provide for an even structure with regular intervals and allow for even distribution of load.

13. As per (Previously presented) dependent claim 8:

Figures 2 and 3 of Page et al shows the elastic connection device (element 50). Also Col 5 line 34.

14. As per (Previously presented) dependent claim 9:

Col 5 lines 34-55 of Page et al disclose the use of a tolerance ring that can be modified as a result of external pressure.

15. As per (Previously presented) dependent claims 14-16:

Col 1 lines 67-68 and Col 2 lines 1-8 of Page et al disclose the use of an elastic connection device made of material such as natural or synthetic rubber. Hill discloses the device as in claim 1 above. Hill does not disclose the elastic connection device to have components spaced on the outer surface area of the hollow cylindrical body. Page et al teaches the use of o-rings made of rubber, tolerance rings made of metal, which can modify its shape as a result of external pressure. It would have been obvious at the time the invention was made to modify the device of Hill with the teachings of Page et al to make a motor (rotary support) with o-rings and tolerance rings of metal. The motivation to do so is that it would allow for the roll to compress radially, expand circumferentially (Col 5 lines 34-55 of Page et al) and this would improve the flexibility of the rotary support.

Claims 11, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 6443295) in view of Biancalani (US 5469608).

16. As per (Previously presented) dependent claims 11 and 13:

Abstract and Figure 3 of Biancalani show the cooling channels as part of a cooling circuit in the hollow cylindrical body to be in longitudinal direction with the tubular structure for circulating the coolant (also Col 3 lines 19-38).

Hill teaches the device of claim 1 above. Hill does not disclose the use of cooling channels in the motor structure. Biancalani teaches the use of cooling paths and channels to cool the motor. It would have been obvious to a person having ordinary

skills in the art to modify the device of Hill to have cooling paths or channels to cool the motor. The motivation to do so is that it would allow for heat dissipation from the motor directly to the outside (Col 1, line 22) and to further limit the temperature of the motor components and allow for cyclic reversal of the cooling flow (Col 3 lines 20-21 and 37-38 of Biancalani).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hill (US 6443295) in view of Hall (US 6035999).

17. As per (New) dependent claim 20:

The rotary support of claim 19, wherein the fixing elements are constructed in the form of elevations projecting out from the outer circumference of the hollow-cylindrical body and placed in offset relationship to allow circulation of a coolant.

Hill teaches the device as claimed above. Hill does not explicitly teach the fixing elements to be placed in an offset relationship. Hall in Figs 1,18,20,22 and 2,22 teaches the use of rollers that are placed in an offset relationship. It would have been obvious to a person having ordinary skills in the art at the time the invention was made to modify the device of Hill with the teachings of Hall to arrange the fixing elements in an offset relationship. The motivation to do so would be that it would allow power to be transferred from a drive roller assembly to each driven roller assembly (Col 4 II 20-24 of Hall) and it would also reduce waste of energy and mechanical wear (Col 1 II 49-52 of Hall).

Conclusion

Response to Arguments

18. Applicant's arguments filed 11/27/2007 have been fully considered but they are not persuasive.

As per applicant's argument regarding the o-ring cited by examiner in Hill's Fig 1,96) does not establish an elastic force fitting connection, it is clear that the o-ring in Hill's Fig 1,96 is pressing against the tubular structure, therefore it "establishes an elastic force fitting connection".

As per applicant's argument regarding the tubular structure being axially closed on both ends, no claim is made by applicant that tube does not have closed ends.

As per applicant's argument regarding the tubular structure being affected by screw fasteners, it is clear from Fig 1 of Hill that the fasteners (element 84) are securing the end plate (element 14) of the device in the axial direction and NOT in the radial direction.

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to NAISHADH N. DESAI whose telephone number is (571)270-3038. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2204. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Naishadh N Desai
Patent Examiner

DALE R. GUTHRIE
SUPERVISOR, PATENT EXAMINERS
TELEPHONE (571) 272-1000